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Department of the Interior
Attention: Rules Processing Team (RPT)
Minerals Management Service; MS 4024
381 Elden Street
Herndon, Virginia 20170-4817

Re: Incorporation by Reference of American Petroleum Institute's Specification 2C for Offshore Cranes

Here are my comments in response to the questions in your notice in the Federal Register:

(a) Will the addition of API Spec 2C to MMS's documents incorporated by reference increase safety and safe operations on the OCS?

No. There is too much flexibility in interpretation of Spec 2C for it to have any effect on safety of OCS operations. Only if some of the flexibility is removed will there be an increase in safety. I address the shortcomings of Spec. 2C below.

(b) Are there other standards for offshore cranes that may be appropriate for MMS to incorporate as part of MMS's regulations?

Yes, MMS should also accept cranes certified to the American Bureau of Shipping's "Certification of Cranes (1991)"

(c) When should MMS require all cranes on OCS fixed platforms to be fully compliant with API Spec 2C?

This question seems to presume that: (1) despite the question posed immediately before, there are no other standards appropriate to offshore cranes; and (2) API Spec 2C is appropriately applied to "all cranes on OCS fixed platforms." Why did MMS pose the previous question if it has already made up its mind? A reading of Spec 2C would reveal that it is only applicable to pedestal cranes. MMS should use this rulemaking to prohibit the use of mobile cranes on OCS fixed platforms.

(d) Is a 1-year transition period enough time for industry to comply with the change proposed in §250.108(c)?

Again, this question implies that MMS isn't going to consider any alternatives to the changes it proposed. This said, one year should offer enough time if MMS is willing to accept as "existing" any crane that has been ordered prior to the date of the final rule.

(e) Should MMS establish a requirement similar to the U.S. Coast Guard (USCG), which requires cranes to be installed according to an approved crane plan and inspected and load tested by an Agency-approved third party when the crane is installed?

Yes.

(f) Should MMS require all new cranes for installation on OCS fixed platforms to have an API monogram on the nameplate of the crane as evidence of certification of the anti-two block safety device?

This question is poorly phrased. If the only purpose for seeking the monogram is to assure that the anti-two blocking device is installed, much of the inspection required for monogramming of the crane is wasted. Further, the monogramming is only an indication that the device is installed at the time of manufacture. It provides not guarantee that it will remain on the crane, or that it will be functional in service.

Again, the question presumes that only Spec 2C is appropriate. ABS certified cranes should be accepted as well.

In any case, MMS should require a third-party certification of crane design and construction. MMS should consider establishing criteria for third parties performing these services. API and ABS can then be assessed against these criteria to determine if the API or ABS certification programs are adequate. To preclude giving API a monopoly on performing this service, MMS should not require API monogramming unless and until it has established the standards by which such third-party certification is to be accepted and has provision in place for accepting certification by other third-parties.

(g) Should a rental crane that is installed on OCS fixed platforms be considered a new crane and, therefore, be required to be fully compliant with API Spec 2C?

Again, the presupposition that only API Spec. 2C should be incorporated by reference and that it is the only standard that should be incorporated. Is this an open and impartial rulemaking proceeding or some means of obtaining justification for a predetermined course of action.

If MMS adopts the position that any crane installed on a platform is a new crane, and therefore required to be fully compliant with (the current requirements of) API Spec 2C (or any other standards it might be unwillingly convinced to accept) then it would have a tremendous fiscal impact on the owners of this rental equipment. Further, it is generally not practicable to retroactively seek certification of existing equipment as it not reasonably practical to assess many of the elements of construction and assembly outside the assembly area, e.g., welding procedures and qualifications of welders. Accordingly, I would suggest that MMS establish a program for registration of existing cranes. The owners of this equipment would be required to demonstrate conformance with one of the accepted standards or retire the equipment within a specified period. One year should be allotted for fitting of an acceptable anti-two blocking device, 2 years for existing load charts to be revised to reflect dynamic loading, and 5 years until retirement of the equipment or demonstration of full conformance.

(h) Should MMS limit the type of anti-two block devices that are acceptable? What are the known failure rates of the different types?

MMS should examine the SAE standards in this regard.

Some of the problems with anti-two block devices include:

- Some devices are particularly prone to malfunction if exposed to salt-spray or icing. The latter is not a problem in the Gulf of Mexico, but might be in other areas potentially subject to MMS jurisdiction.

- Some of the devices are not easily tested. Repeated testing, as required by RP 2D leads to failure of the device, and failure of the device during testing imposes some of the same risks that MMS is trying to ameliorate.
- Some of the devices are designed to be easily accessed for maintenance and repair. In particular, some devices require personnel to climb the length of the boom to for servicing. This is an ergonomics issue that MMS should attempt to address.
- Some of the devices cannot be by-passed to allow repositioning of the crane in an emergency, or should the device fail.

(i) Should MMS consider an additional cost factor for retrofitting existing cranes with the anti-two block safety device (e.g., an associated cost for the amount of time a crane is expected to be out-of-service while it is being retrofitted.

Absolutely, just as it should consider the cost of replacing any crane that cannot be fitted with an anti-two block device.

Here are some of the other problems with API Spec 2C

1. Spec 2C applies only to pedestal mounted cranes. Regulatory standards for other types of cranes (e.g., crawler cranes) should also be promulgated or they should be prohibited.

2. There is no definition of "crane" provided in the MMS regulations. How is a 'crane' distinguished from other hoisting and weight handling equipment?

3. The proposed rules apply only to cranes on fixed platforms. I presume this is to avoid conflict with U.S. Coast Guard requirements. However, no justification is given for not applying these standards in other areas where MMS has jurisdiction but the Coast Guard does not. MMS should apply its standards to all cranes used in conjunction with OCS activities which are not subject to U.S. Coast Guard design and inspection requirements, <u>including</u> construction activities. There should be ample justification for such action given at least one recent spectacular, and costly, crane failure during a construction activity.

4. API Spec 4C provides an inappropriate degree of latitude in the specification of dynamic coefficients. There is a lack of specificity in defining the values of V_d (absolute vertical velocity of the cargo deck at the pick point) and V_R (relative vertical velocity of the cargo deck at the pick point). Users of the specification are referred to a non-mandatory Commentary for information on selecting these values. The guidance provided on wave heights and periods is overly generalized, yet the reader is given the impression that their use, in lieu of location specific values, is appropriate. At a minimum, MMS should require operators to demonstrate that the design of the crane is based on sea conditions at the 95^{th} percentile for the particular location. Spec 4C also implies that multiple load-rating charts could be developed for use with differing significant wave heights – this should be prohibited unless an instrument for directly measuring and displaying significant wave height is provided at the crane operator's position.

5. More specificity is required in presenting information on the "basis of ratings" displayed in the load rating chart. For example, it is not clear how the load-rating chart is to provide information on wind speed when it is not specified by the purchaser, how the absolute or relative vertical velocity information used in the development of the load-rating chart is to be presented, or the fatigue life.

6. RP2D only provides suggestion on repair, remanufacture, or re-qualification of cranes. The "shoulds" should be replaced by "musts."

7. No requirements (only recommendations in RP2D) are given regarding replacement of critical components in order to retain the cranes in the 'as certified' condition, for example, there should be requirements that all components in the load path of the crane, when replaced, be replaced by components that meet or exceed the standards applied to the original components, *e.g.*, replacement of wire rope, sheave pins, etc.

8. The references to ANSI standards A12.1 and A14.3 are inadequate as both refer to standards that are no longer readily available, and certainly are not current. Similarly, SAE J223 is not a current standard.

9. References to supporting a 200-pound person should be revised to reference a heavier individual, *e.g.*, 250 pounds, at a minimum. A general requirement is needed to require that an assessment be made of the design of the crane for servicing and maintenance to assure that it does not place servicing or inspection personnel in a position of added risk.

10. The noise level allowed by Spec 2C is too high. Most modern standards would require hearing protection to be worn by persons exposed to this level. The noise level should be reduced to well below 85dB(A) at the operator's station. In this regard it should be recognized that acoustic performance would likely deteriorate over time so that the as-delivered crane should be well below this value. RP 2D should be revised to require periodic testing of the noise level at the operator's position, bearing in mind that it is probably NOT appropriate for crane operators to wear hearing protection.

11. Spec 4C does nothing to assure the adequacy of crane foundations, safety marking of areas around cranes where personnel entry is restricted, or appropriate lighting levels for cabs and instruments for nighttime operations.

12. API Spec 4C does not require best available and safest technology. It fails to incorporate automatic load-indicating technology as a requirement.

Sincerely,

Clarence Fontenot